

## CLAIMS:

1. An optical record carrier for recording information using a light beam in the UV wavelength range, in particular having a wavelength in the range from 230 to 270 nm, comprising a substrate layer and a recording stack comprising:

- two dielectric layers and

5 - an information layer sandwiched between said dielectric layers, said information layer comprising a recording material for forming marks and spaces representing an information by irradiation of a UV light beam, wherein said recording material is an alloy comprising at least two materials of the group of materials containing Ge, Sb, Te, In, Se, Bi, Ag, Ga, Sn, Pb, As.

10 2. An optical record carrier as claimed in claim 1, wherein said information layer has a thickness in the range from 3 nm to 50 nm, in particular from 5 nm to 25 nm.

15 3. An optical record carrier as claimed in claim 1, wherein said recording material is an In-doped Sb-Te alloy material.

20 4. An optical record carrier as claimed in claim 1, wherein the dielectric layer facing the incident UV light beam has a thickness larger than 10 nm and the other dielectric layer I2 has a thickness in the range from 2 nm to 50 nm, in particular from 3 nm to 25 nm.

5. An optical record carrier as claimed in claim 1, wherein said dielectric layers are made of a material of the group of materials containing  $\text{Al}_2\text{O}_3$ ,  $\text{SiO}_2$ , C, NaCl, ZrO,  $\text{Si}_3\text{N}_4$ , LiF, KCl.

25 6. An optical record carrier as claimed in claim 1, further comprising a metal heat sink layer between said substrate layer and said the dielectric layer not facing the incident UV light beam.

7. An optical record carrier as claimed in claim 6, wherein said metal heat sink layer has a thickness larger than 5 nm, in particular larger than 15 nm.

8. An optical record carrier as claimed in claim 1, further comprising a metal heat sink layer on top of the dielectric layer facing the incident UV light beam, said metal heat sink layer being semitransparent.

9. An optical record carrier as claimed in claim 8, wherein said metal heat sink layer has thickness in the range from 3 nm to 50 nm, in particular from 5 nm to 15 nm.

10. An optical record carrier as claimed in claim 6 or 8, wherein said metal heat sink layers are made of a material or an alloy based on a material of the group of materials containing Al, Ag, Cu, Ag, Ir, Mo, Rh, Pt, Ni, Os, W.

11. An optical record carrier as claimed in claim 6 or 8, wherein said metal heat sink layers are semi-transparent or transparent.

12. An optical recording carrier as claimed in claim 1, wherein the recording stack further comprises additional dielectric layers or multi-layer structures on either or both of its sides.

13. An optical recording carrier as claimed in claim 1, further comprising at least one additional recording stack and at least one transparent spacer layer for separating the recording stacks from each other, said spacer layer being in particular made of polydimethylsiloxane (Sylgard 184 Silicone Elastomer) and having a thickness in the range from 1  $\mu\text{m}$  to 100  $\mu\text{m}$ .

14. An optical record carrier as claimed in claim 1, further comprising a transparent cover layer on top of the side of the said record carrier facing the incident UV light beam, said cover layer being in particular made of polydimethylsiloxane (Sylgard 184 Silicone Elastomer) and having a thickness in a range from 5  $\mu\text{m}$  to 300  $\mu\text{m}$ .

15. An optical record carrier as claimed in claim 1, further comprising a transparent or semi-transparent hard-coating layer on top of the side of the said record carrier

facing the incident UV light beam, said hard-coating layer having a thickness in the range from 5 nm to 300  $\mu\text{m}$ .